

1       1. A method comprising:  
2           negatively biasing a spatial light modulator; and  
3           reversing the bias.

1       2. The method of claim 1 including biasing a top  
2       plate and a pixel electrode.

1       3. The method of claim 2 including biasing said top  
2       plate to a negative voltage.

1       4. The method of claim 3 including maintaining said  
2       pixel electrode at a positive voltage.

1       5. The method of claim 4 including biasing said  
2       pixel electrode across its full dynamic range.

1       6. The method of claim 1 including alternately  
2       biasing the top plate negatively and positively.

1       7. A spatial light modulator comprising:  
2           a top plate;  
3           a liquid crystal layer;  
4           a pixel electrode, said top plate and said pixel  
5       electrode sandwiching said liquid crystal layer; and  
6       a drive circuit to apply positive and negative bias  
7       potentials to one of said electrode and said top plate.

1       8. The spatial light modulator of claim 7 including  
2 a drive circuit to apply a negative bias potential to said  
3 top plate.

1       9. The spatial modulator of claim 7 wherein said  
2 spatial light modulator is a liquid crystal over silicon  
3 spatial light modulator.

1       10. The spatial light modulator of claim 7 wherein  
2 said drive circuit applies positive and negative bias  
3 potentials in alternating frames.

1       11. The spatial light modulator of claim 8 wherein  
2 said top plate is formed of indium tin oxide.

1       12. A method comprising:  
2           applying a positive bias to a spatial light  
3 modulator in a negative frame; and  
4           applying a negative bias to a spatial light  
5 modulator during a positive frame to reduce the magnitude  
6 of the positive voltage that is necessary to bias the  
7 spatial light modulator.

1           13. The method of claim 12 including biasing a top  
2 plate and a pixel electrode.

1           14. The method of claim 13 including biasing said top  
2 plate to a negative voltage.

1           15. The method of claim 14 including maintaining said  
2 pixel electrode at a positive voltage.